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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,243	12/28/2000	Nicholas G. Samra	2207/10613	7462

7590 06/16/2005

KENYON & KENYON  
333 W. San Carlos, Street, Suite 600  
San Jose, CA 95110-2711

EXAMINER

MEONSKE, TONIA L

ART UNIT PAPER NUMBER

2183

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/752,243	<b>Applicant(s)</b> SAMRA, NICHOLAS G.	
	<b>Examiner</b> Tonia L. Meonske	<b>Art Unit</b> 2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                         |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 9-12, 14, 16, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al., US Patent 5,367,651, in view of Alpha Architecture Handbook (Herein after referred to as "Alpha"), and Colwell et al., US Patent 5,524,262.
3. Claims 3-8, 13, 15, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al., US Patent 5,367,651, in view of Alpha Architecture Handbook (Herein after referred to as "Alpha"), Colwell et al., US Patent 5,524,262, and Rotenburg et al., Trace Cache: A Low Latency Approach to High Bandwidth Instruction Fetching.
4. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, mailed on August 13, 2004.

### *Response to Arguments*

5. Applicant's arguments filed April 4, 2005 have been fully considered but they are not persuasive.
6. On pages 6 and 7, Applicant argues in essence:

*"If a computer architecture contains a dedicated zero register like the one described in Alpha, then there is no need for and no benefit in having a zero generating apparatus like the one taught in Smith. Alpha and Smith teach two different way of accomplishing the same objective-zero generation. As the examiner states in the office action, the purpose of a physical zero register like the one taught in Alpha is to eliminate the need for a*

*zeroing instruction, like the one taught in Smith. As evidenced by the examiner's description of Alpha, Alpha and Smith et al. in fact teach away from combining. Since the Alpha and Smith references cannot be properly combined, the office action fails to make a prima facie case of obviousness. "*

However, if a computer architecture contains a dedicated zero register like the one described in Alpha, then there is in fact a benefit in having a zero generating apparatus like the one taught in Smith. For the following discussion, please refer to Figure 7, element 86b in Smith. When a clear register and load byte instruction are detected, they are combined into a single load by zero extended instruction so the two instructions can be executed in parallel. The clear instruction is a separate and unique instruction in the instruction set of Smith. Having a register which always reads as zero, such as that taught by Alpha, eliminates the need of implementing a separate clear register instruction in the instruction set. For example, a register could effectively be cleared by using an already existing move or copy instruction from a register which always reads as zero. Since move and copy instructions are already existing instructions in the instruction set, there is no need to have a unique zeroing instruction, such as the clear instruction of Smith. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the invention of Smith et al. include a physical zero register which reads as zero, as taught by Alpha, in order to eliminate the need for an extra zeroing instruction in the instruction set.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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8. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tonia L. Meonske whose telephone number is (571) 272-4170. The examiner can normally be reached on Monday-Friday, 8-4:30.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie P. Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

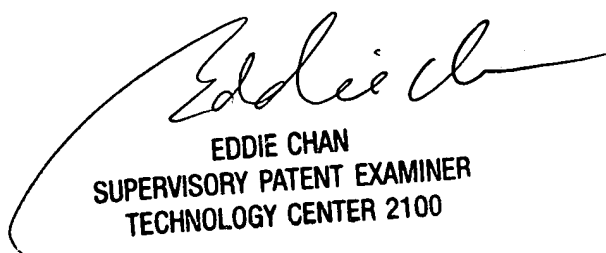
11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tlm

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EDDIE CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100